

Please amend the claims as follows:

Claim 1 (Currently Amended): An alkyldiketene-containing aqueous polymer dispersion, ~~which is obtainable~~ obtained by miniemulsion polymerization of hydrophobic monoethylenically unsaturated monomers in the presence of alkyldiketenes.

Claim 2 (Currently Amended): An alkyldiketene-containing aqueous polymer dispersion as claimed in claim 1, ~~which is obtainable~~ obtained by emulsifying an organic phase, which comprises ~~contains~~

- at least one alkyldiketene and
- at least one monoethylenically unsaturated hydrophobic monomer

in solution, in the presence of a surface-active agent in an aqueous phase with the aid of a mechanical emulsification process with formation of a miniemulsion having a particle size of the emulsified organic phase of not more than 500 nm, at least one of the two phases additionally ~~containing~~ comprising a free radical polymerization initiator or a polymerization initiator being added to the miniemulsion, and polymerizing the monomers of the miniemulsion.

Claim 3 (Currently Amended): An alkyldiketene-containing aqueous polymer dispersion as claimed in claim 1, ~~claim 1 or 2~~, wherein the organic phase is emulsified in the aqueous phase by the action of ultrasound or with the aid of a high pressure homogenizer.

Claim 4 (Currently Amended): An alkyldiketene-containing aqueous polymer dispersion as claimed in claim 1, ~~any of claims 1 to 3~~, wherein the organic phase ~~additionally contains~~ further comprises a nonpolymerizable hydrophobic compound.

Claim 5 (Currently Amended): An alkyldiketene-containing aqueous polymer dispersion as claimed in claim 1, ~~any of claims 1 to 4~~, wherein the organic phase ~~additionally contains~~ further comprises a water-insoluble monomer which is selected from vinyl esters of C<sub>12</sub>-C<sub>22</sub>-carboxylic acids, vinyl ethers of C<sub>12</sub>-C<sub>30</sub>-alcohols and C<sub>12</sub>-C<sub>22</sub>-alkyl acrylates.

Claim 6 (Currently Amended): An alkyldiketene-containing aqueous polymer dispersion as claimed in claim 1, ~~any of claims 1 to 5~~, wherein the organic phase comprises a solution, a binary or polynary mixture and/or a dispersion which comprises ~~contains~~

- at least one C<sub>14</sub>- to C<sub>22</sub>-alkyldiketene,
- at least one monomer from the group consisting of styrene, methylstyrene, C<sub>2</sub>- to C<sub>28</sub>-olefins, esters of monoethylenically unsaturated carboxylic acids of 3 to 5 carbon atoms and monohydric alcohols of 1 to 22 carbon atoms, vinyl esters of C<sub>1</sub>- to C<sub>18</sub>-carboxylic acids, acrylonitrile and methacrylonitrile, and
- at least one hydrocarbon, an alcohol of 10 to 24 carbon atoms, a hydrophobic polymer having a molar mass Mw of <10 000, a tetraalkylsilane, a vinyl ester of C<sub>12</sub>-C<sub>22</sub>-carboxylic acids, a vinyl ether of C<sub>12</sub>-C<sub>30</sub>-alcohols, a C<sub>12</sub>-C<sub>22</sub>-alkyl acrylate and/or a mixture of said compounds.

Claim 7 (Currently Amended): An alkyldiketene-containing aqueous polymer dispersion as claimed in claim 1, ~~any of claims 1 to 6~~, wherein the organic phase comprises a solution which comprises ~~contains~~

- stearyldiketene, palmityldiketene and/or behenyldiketene,

- styrene, n-butyl acrylate, sec-butyl acrylate, tert-butyl acrylate, 2-ethylhexyl acrylate, methyl methacrylate, n-butyl methacrylate, acrylonitrile, methacrylonitrile and/or vinyl acetate and
- hexadecane, olive oil, polystyrene having a molar mass Mw of from 500 to 5000, siloxanes having a molar mass Mw of from 500 to 5000, cetyl alcohol, stearyl alcohol, palmityl alcohol, behenyl alcohol, vinyl esters of C<sub>12</sub>–C<sub>22</sub>-carboxylic acids, vinyl ethers of C<sub>12</sub>–C<sub>30</sub>-alcohols and/or C<sub>12</sub>–C<sub>22</sub>-alkyl acrylates.

Claim 8 (Currently Amended): An alkyldiketene-containing aqueous polymer dispersion as claimed in claim 1, ~~any of claims 1 to 7~~, wherein the organic phase comprises a solution which comprises ~~contains~~

- stearyldiketene and/or palmityldiketene and
- styrene, n-butyl acrylate, tert-butyl acrylate and/or acrylonitrile.

Claim 9 (Currently Amended): An alkyldiketene-containing aqueous polymer dispersion as claimed in claim 1, ~~any of claims 1 to 8~~, wherein the organic phase ~~additionally contains~~ further comprises hydrophilic monomers in amounts such that the resulting copolymers have a solubility of not more than 10, ~~preferably not more than 50~~, g/l in water at 20°C and a pH of 2.

Claim 10 (Currently Amended): An alkyldiketene-containing aqueous polymer dispersion as claimed in claim 9, wherein at least one compound selected from the group consisting of the ethylenically unsaturated carboxylic acids of 3 to 5 carbon atoms, acrylamide, methacrylamide, N-vinylformamide, vinyl ethers, 2-acrylamido-2-methylpropane-sulfonic acid, vinylsulfonic acid, styrenesulfonic acid, sulfopropyl acrylate,

sulfopropyl methacrylate, fumaric acid, maleic acid, itaconic acid, maleic ~~and/or~~ maleic anhydride, and mixtures thereof is used as the hydrophilic monomer.

Claim 11 (Currently Amended): An alkyldiketene-containing aqueous polymer dispersion as claimed in claim 1, obtained ~~any of the preceding claims, which are obtainable~~ by miniemulsion polymerization in the presence of at least one water-soluble and/or water-swallowable polysaccharide.

Claim 12 (Currently Amended): An alkyldiketene-containing aqueous polymer dispersion as claimed in claim 11, ~~which is obtainable~~ obtained by mixing the miniemulsion with an aqueous solution which ~~contains~~ comprises at least one water-soluble and/or water-swallowable polysaccharide, and polymerizing the monomers of the miniemulsion in the presence of the water-soluble and/or water-swallowable polysaccharide.

Claim 13 (Original): A process for the preparation of an alkyldiketene-containing aqueous polymer dispersion, wherein the miniemulsion polymerization of hydrophobic monomers is carried out in the presence of alkyldiketenes.

Claim 14 (Currently Amended): A process for the preparation of an alkyldiketene-containing aqueous polymer dispersion as claimed in claim 13, wherein an organic phase which comprises ~~contains~~

- at least one alkyldiketene and
- at least one monoethylenically unsaturated hydrophobic monomer

in solution is emulsified in the presence of a surface-active agent in an aqueous phase with the aid of a mechanical emulsification process with formation of a miniemulsion having

a particle size of the emulsified organic phase of not more than 500 nm, at least one of the two phases ~~additionally containing~~ further comprising a free radical polymerization initiator or a polymerization initiator being added to the miniemulsion, and the monomers of the miniemulsion are then polymerized.

Claim 15 (Currently Amended): A process as claimed in claim 13, ~~claim 13 or 14~~, wherein the organic phase ~~additionally contains~~ further comprises at least one nonpolymerizable hydrophobic compound.

Claim 16 (Currently Amended): A process as claimed in claim 13, ~~any of claims 13 to 15~~, wherein the organic phase ~~additionally contains~~ further comprises a water-insoluble monomer which is selected from vinyl esters of C<sub>12</sub>–C<sub>22</sub>-carboxylic acids, vinyl ethers of C<sub>12</sub>–C<sub>30</sub>-alcohols and C<sub>12</sub>–C<sub>22</sub>-alkyl acrylates.

Claim 17 (Currently Amended): A process as claimed in claim 1, ~~any of claims 13 to 16~~, wherein the organic phase comprises a solution, a binary or polynary mixture and/or a dispersion which comprises ~~contains~~

- at least one C<sub>14</sub>– to C<sub>22</sub>-alkyldiketene and
- at least one monomer from the group consisting of styrene, methylstyrene, C<sub>2</sub>– to C<sub>28</sub>-olefins, esters of monoethylenically unsaturated carboxylic acids of 3 to 5 carbon atoms and monohydric alcohols of 1 to 22 carbon atoms, vinyl esters of C<sub>1</sub>– to C<sub>22</sub>-carboxylic acids, acrylonitrile and methacrylonitrile.

Claim 18 (Currently Amended): A process as claimed in claim 13, ~~any of claims 13 to 17~~, wherein the organic phase comprises a solution which comprises ~~contains~~

- stearyldiketene and/or palmityldiketene and
- styrene, n-butyl acrylate, tert-butyl acrylate and/or acrylonitrile.

Claim 19 (Currently Amended): A process as claimed in claim 13, ~~any of claims 13 to 18~~, wherein the organic phase ~~contains~~ comprises, as the nonpolymerizable hydrophobic compound, a hydrocarbon, an alcohol of 10 to 24 carbon atoms, a hydrophobic polymer having a molar mass Mw of <10 000, a tetraalkylsilane and/or a mixture of said compounds.

Claim 20 (Currently Amended): A process as claimed in claim 13, ~~any of claims 13 to 19~~, wherein the aqueous phase ~~contains~~ comprises a surface-active anionic compound.

Claim 21 (Currently Amended): A process as claimed in claim 13, ~~any of claims 13 to 20~~, wherein the aqueous phase ~~contains~~ comprises, as surface-active agent, sodium laurylsulfate, sodium dodecylsulfate, sodium hexadecylsulfate, sodium dioctylsulfosuccinate and/or at least one adduct of from 15 to 50 mol of ethylene oxide with 1 mol of a C<sub>12</sub>- to C<sub>22</sub>-alcohol.

Claim 22 (Currently Amended): A process as claimed in claim 13, ~~any of claims 13 to 21~~, wherein the organic phase further comprises ~~additionally contains~~ hydrophilic monomers in an amount such that the resulting copolymers have a solubility of not more than 10, ~~preferably not more than 50~~, g/l in water at 20°C and a pH of 2.

Claim 23 (Currently Amended): A process as claimed in claim 22, wherein at least one compound selected from the group consisting of the ethylenically unsaturated carboxylic acids of 3 to 5 carbon atoms, acrylamide, methacrylamide, N-vinylformamide, vinyl ethers,

2-acrylamido-2-methylpropanesulfonic acid, vinylsulfonic acid, styrenesulfonic acid, sulfopropyl acrylate, sulfopropyl methacrylate, fumaric acid, maleic acid, itaconic acid, maleic and/or maleic anhydride, and mixtures thereof is used as the hydrophilic monomer.

Claim 24 (Currently Amended): A process as claimed in claim 13, ~~any of claims 13 to 23~~, wherein the miniemulsion polymerization is carried out in the presence of at least one water-soluble and/or water-swellaable polysaccharide.

Claim 25 (Currently Amended): A process as claimed in claim 24, wherein the miniemulsion is mixed with an aqueous solution which ~~contains~~ comprises an aqueous starch and the mixture is polymerized in the presence of at least one polymerization initiator.

Claim 26 (Currently Amended): A process as claimed in claim 24, ~~either of claims 24 or 25~~, wherein the miniemulsion is mixed with an aqueous solution which ~~contains~~ comprises a degraded starch in solution.

Claim 27 (Currently Amended): A process as claimed in claim 24, ~~any of claims 24 to 26~~, wherein the miniemulsion is mixed continuously or batchwise with the aqueous solution of a water-soluble polysaccharide and polymerized.

Claim 28 (Currently Amended): A process as claimed in claim 24, ~~any of claims 24 to 27~~, wherein the water-soluble polysaccharide used is a degraded starch.

Claim 29 (Canceled):

Claim 30 (New): A method for applying a composition on a surface, said method comprising:

applying said said alkyldiketene-containing aqueous polymer dispersion as claimed in claim 1 on an article,

wherein said article is paper, leather, natural fibers, natural textiles, manmade fibers, manmade textiles, or mixtures thereof.